

REMARKS

Applicants amended claim 15 to more precisely define the method of the present invention. New claims 19 - 22 have been added herewith. Claims 15 - 22 are now pending in this application. The remaining claims were amended to conform to the style of newly added claims 19 and 20. Reconsideration of the patentability of the pending claims is requested in view of the remarks and amendments set forth herein.

I. 35 USC 103 (a) Rejection over Kawada in view of Takeuchi

Claims 15 -18 stand rejected under 35 USC 103(a) over Kawada in view of Takeuchi. This rejection is traversed.

Kawada discloses a storage container for wafers that consists of slots or shelves on which each wafer is supported. The Examiner asserts that these slots (16) constitute orientation artifacts (*Office Action dated 01/14/2005 at page 2*). Slots 16 do not function to orient wafers since Kawada's wafers can be inserted into the slots in any manner –right side up; upside down, 180 degrees relative to an adjacent wafer, et cetera. The result is that Kawada's container stores a series of wafers having dissimilar and unknown orientations. Moreover, the slots (16) in Kawada's containers lack the type of contour that would permit engagement with a wafer element as recited in claim 15 of the present invention.

Claim 15 further recites “placing each wafer assembly into a wafer storage chamber to form a stack wherein each wafer element has an orientation that is visible when the chamber is uncovered...” Fig. 6 of Kawada clearly shows that when Kawada's container is uncovered, the orientation of the wafers is not visible.

Takeuchi fails to remedy the deficiencies of Kawada. Takeuchi discloses semiconductor wafers on a frame ring with locating portions 11a. Takeuchi's ring frame cassette is clearly not constructed to mate with at least one locating portion of a framed wafer. Indeed, Takeuchi describes a process for scribing and dividing

up wafers into die. In Takeuchi's process, wafer frames are taken out of a ring frame cassette and these ring frames are taken to a prealignment section where they are sequentially aligned in the direction θ . (*See 5,238,876 patent at col. 5, lines 4-10.*) One advantage of Applicants' invention is that the wafers are in a known orientation in their storage chamber, rendering it unnecessary to remove the wafers from their contain simply to prealign them to a known orientation during wafer processing. In addition, Takeuchi fails to teach or suggest storing a stack of wafers—such as Kawada's wafers—in a manner that would allow the orientation of the stack to be visible and known as recited in claim 15.

II. New Claims 19 & 20 are also Patentable over the Cited Prior Art

Neither Kawada nor Takeuchi, nor their combination, teach or suggest engagement of at least one alignment artifact on a wafer element with at least one orientation artifact as recited in the new claims. Moreover, neither Kawada nor Takeuchi teach or suggest storing a wafer stack in a container wherein each wafer element has an orientation that is visible when the chamber is uncovered as recited in claim 20. Finally, the combination of Kawada in view of Takeuchi, or Takeuchi in view of Kawada, also fails to disclose or suggest claims 20 – 22, as the orientation of each wafer element is not visible when the chamber is uncovered. Accordingly, Applicants respectfully submit that all of the new claims are patentable over the cited prior art.

III. Conclusion

Therefore, Applicants respectfully request a Notice of Allowance indicating that claims 15 - 22 are allowable. The Examiner is encouraged to contact the undersigned if any matters remain to be discussed concerning the allowance of the present application.

Respectfully submitted,



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